

CALTRANS FORMAT DOYLEDRIIVE ARUPLOGS 11-2-08.GPJ ARUP LIBRARY CALTRANS FORMAT GLB 11/3/08

LOGGED BY M. McKee	BEGIN DATE 1-4-08	COMPLETION DATE 1-8-08	BOREHOLE LOCATION (Lat/Long or North/East and Datum) N2120937.044 / E5997479.004 (NAD83)	HOLE ID DNB-R4
DRILLING CONTRACTOR Gregg Drilling and Testing, Inc.	BOREHOLE LOCATION (Offset, Station, Line) Offset 106ft R Sta 50+43 NB Alignment		SURFACE ELEVATION 10.693 ft (NAVD88)	
DRILLING METHOD Mud Rotary	DRILL RIG Fraste Multi-drill (track)		BOREHOLE DIAMETER 5 in.	
SAMPLER TYPE(S) AND SIZE(S) (ID) MC (2.4"), SPT (1.4"), Shelby (2.87"), Pitcher (2.87")	SPT HAMMER TYPE Automatic, 140 lbs., 30-inch drop		HAMMER EFFICIENCY, ERI 72.9%	
BOREHOLE BACKFILL AND COMPLETION Neat Cement Grout backfill	GROUNDWATER DURING DRILLING READINGS	AFTER DRILLING (DATE) 2.25	TOTAL DEPTH OF BORING 127.8 ft	

ELEVATION (ft)	DEPTH (ft)	Material Graphics	Description	Sample Location	Sample Number	Blows per 6 In	Blows per Foot	Recovery (%)	RQD (%)	Moisture Content (%)	Dry Unit Weight (pcf)	Shear Strength (tsf)	Drilling Method	Casing Depth	Remarks
	0		1" ASPHALT CONCRETE.												
	1		CLAYEY GRAVEL with SAND (GC), loose, gray, moist to wet. [FILL]												
8.69	2			X	S1	7	9	100							
	3					5									
	4		CLAYEY SAND (SC), very loose, gray to dark olive gray, wet.	X	S2	2	3	100							
6.69	5					1									
	6					2									
4.69	7														
	8		Fat CLAY with SAND (CH), very soft, dark gray, moist to wet, SAND is fine. [BAY MUD]		U3		RWO	0							
2.69	9														
	10				U4			93							
0.69	11		CLAYEY SAND (SC), loose, dark gray to bluish gray, moist to wet, fine. [MARINE SAND]												
-1.31	12														
	13														
-3.31	14				S5	2	7	0							
	15		14.5', Grades less clayey.			3									
	16		Poorly graded SAND (SP), medium dense, gray to dark gray, wet, fine, trace SILT.	X	S6	4	11	100							
-5.31	17					5									
	18					6									
-7.31	19		Grades fine to medium SAND, with trace of shell fragments up to 1/16" diameter.	X	S7	15	44	100							
	20					21									
-9.31	21		Fat CLAY (CH), soft, gray, wet. [BAY MUD]	X	S8	3	3	100							
	22					1									
-11.31	23		Poorly Graded SAND (SP), dense, dark grayish brown, wet, fine to medium, trace of shell fragments up to 1/16" diameter. [MARINE SAND]			2									
	24														
-13.31	25			X	S9	8	46	100							
						17									
						29									
				X	S10		46	100							

(continued)



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Division of Engineering Services
Geotechnical Services

REPORT TITLE BORING RECORD				HOLE ID DNB-R4
DIST. 4	COUNTY S.F.	ROUTE 101	POSTMILE 8.3/9.4	EA 163701
PROJECT OR BRIDGE NAME Doyle Drive Replacement Project				
BRIDGE NUMBER 34-164R	PREPARED BY T. Carroll		DATE 11-3-08	SHEET 1 of 5

Figure

ELEVATION (ft)	DEPTH (ft)	Material Graphics	Description	Sample Location Sample Number	Blows per 6 In	Blows per Foot	Recovery (%)	RQD (%)	Moisture Content (%)	Dry Unit Weight (pcf)	Shear Strength (tsf)	Drilling Method	Casing Depth	Remarks
-15.31	25		Poorly Graded SAND (SP), dense, yellowish brown and dark grayish brown, wet, fine, trace of SILT at 25.8', mottled. [COLMA SAND]		9 18 28									
-17.31	28			S11	6 10 24	34	100							
-19.31	30		Grades very dense, with iron-oxide staining, with occasional CLAY lenses.	S12	14 24 31	55	100							
-21.31	32													
-23.31	34			S13	23 30 52	82	100							
-25.31	36			S14	12 25 31	56	100							
-27.31	38			S15	26 38 54	92	100							
-29.31	40		Grades very fine to fine.	S16	16 31 37	68	100							
-31.31	42													
-33.31	44			S17	27 47 50/5"	97/ 11"	83							
-35.31	46		~46.0', grades with gray seams of fine SAND.	S18	11 24 37	61	100							
-37.31	48			S19	20 29 32	61	100							
-39.31	50		Poorly graded SAND with CLAY (SP-SC), very dense, yellowish brown and gray brown, very moist, fine, with iron-oxide staining.	S20	13 25 29	54	100							
-41.31	52													
-43.31	54		Grades with heavy iron-oxide staining.	S21	16 22 40	62	100							
	55													

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-45.31	56		Poorly graded SAND with CLAY (SP-SC), very dense, yellowish brown and gray brown, very moist, fine, with iron-oxide staining.											
-47.31	58		Grades dense, with slight iron-oxide staining.	S22	13 21 27	48	100							
-49.31	60													
-51.31	62		Grades very dense.	S23	21 29 42	71	100							
-53.31	64													
-55.31	66													
-57.31	68		Poorly graded SAND (SP), very dense, bluish gray, moist, fine.	S24	28 40 36	76	100							
-59.31	70		SANDY lean CLAY (CL), very stiff, bluish gray, very moist, with trace shells, SAND is fine to coarse, subangular. [OLD BAY CLAY]											
-61.31	72		Fat CLAY (CH), hard, greenish gray, moist, trace fine SAND.											Driller estimates contact with Bay Mud at 71'
-63.31	74			S25	10 17 23	4	89							
-65.31	76													
-67.31	78			U26		RWO	100							
-69.31	80		CLAYEY SAND (SC), medium dense, gray to bluish gray, moist to very moist, trace of shells - moist to very moist. [DEEP MARINE SAND]											
-71.31	82			S27	5 6 7	13	0							
-73.31	84		84.5', grades dark bluish gray, loose, with abundant shells, with lenses of SANDY CLAY.	S28	4 4 5	9	100							

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Figure

ELEVATION (ft)	DEPTH (ft)	Material Graphics	Description	Sample Location	Sample Number	Blows per 6 In	Blows per Foot	Recovery (%)	RQD (%)	Moisture Content (%)	Dry Unit Weight (pcf)	Shear Strength (tsf)	Drilling Method	Casing Depth	Remarks
-75.31	85		CLAYEY SAND (SC), medium dense, gray to bluish gray, moist to very moist, trace of shells - moist to very moist. [DEEP MARINE SAND]												
-77.31	88				U29		RW/2'	100							
-79.31	90		Grades olive gray, with abundant shells.												
-81.31	92		SANDY CLAY (CL), very stiff, olive brown and gray, moist, faintly mottled, trace subangular fine GRAVEL (quartz). [ALLUVIUM]		S30	5 8 12	20	100				PP = 1.6, 0.88			
-83.31	94		Poorly graded SAND with CLAY (SP-SC), brown to reddish brown, very moist, fine to medium, weakly cemented SAND clasts within SAND matrix.												
-85.31	96		Lean CLAY with SAND (CL), hard, olive gray, trace angular to subangular coarse SAND and fine GRAVEL, black specks (carbon), iron-oxide nodules.		U31		RW to 96.5"	100				PP = >2.25			
-87.31	98														
-89.31	100		CLAYEY SAND (SC), dense, yellowish brown, moist, with pockets of yellowish brown SANDY CLAY, black specks (carbon).		S32	13 23 45	68	89							
-91.31	102		Grades with pockets of strongly cemented fine black sand with angular coarse SAND.												
-93.31	104														
-95.31	106		Grades with iron-oxide nodules, grades without pockets of strongly cemented black SAND.		U33		400 psi 500 psi	97							
-97.31	108														
-99.31	110														
-101.31	112		Poorly graded SAND (SP), very dense, grayish brown and reddish brown mottled, fine.		S34	29 31 50/5"	81/11"	100							
-103.31	114														
	115														

(continued)



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Figure

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-105.31	115		Poorly graded SAND (SP), very dense, grayish brown and reddish brown mottled, fine.	U35		RW 2' 400 psi	100							
-107.31	117		Grades reddish brown, moderately cemented, grades with less CLAY.											
-109.31	120			S36	31 40 45	85	100							
-113.31	124		SEDIMENTARY ROCK (MELANGE MATRIX), gray, very intensely weathered, soft, very intensely fractured, sheared shale with sandstone fragments up to 1/2" diameter. [BEDROCK]	U37		400 psi 700 psi	71							Drilling hard at ~124'
-115.31	126			U38		1000 psi	100							Graywacke sandstone in cuttings
-117.31	128		Borehole terminated at a depth of 127.8 feet on 1/8/2008.											
-119.31	130		See Boring Record Legend for soil classification chart and key to test data and sampler type.											
-121.31	132													
-123.31	134													
-125.31	136													
-127.31	138													
-129.31	140													
-131.31	142													
-133.31	144													
	145													



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